

## The Veritas identity & System Omega in the Physikle $\Lambda$ -model.

System Omega  $\omega = \left[ \frac{k}{m} \right]$  appears quite generally in Nature's Laws & familiar Physics identities & relationships.

*Thus we introduce a new lambda model version of System omega  $[\omega]_s$ , & respectfully suggest 'omega' may be masked historically through variant essentially classical expressions, yet can be discovered anew via 'trial by Algebra'.*

First we introduce a Platonik identity invented, discovered, or imagined by the Author and known as the Veritas *equation*, given here.

$$1. \quad h - dd . \lambda = h . \lambda - dd$$

$$1.a \quad \frac{h - dd . \lambda}{h . \lambda - dd} = 1$$

$[-dd]$  means 'double' - dot or  $\frac{d^2}{dt^2}$ , where  $[-dot]$  is likewise  $\frac{d}{dt}$

Newtonian dot notation is implied, albeit somewhat nuanced in a model parametrik sense, i.e. dots may *flow* freely under action of a system omega, and in this fluid or *fluxions* sense, a standard both-ways *time symmetry* is invoked. What is non-standard is that system time  $\{t\}_s$  and system general force  $\{F\}_s$  are synonymous, or actually identical with the system gamma  $[\gamma]_s$ . A model hypothesis is such that a '*time is force*' argument applies. ., {subscript [s]} = 'system' as applied in the Lambda model}

Also system Omega is negative system gamma, or -ve F

$$2. \{ \omega = -ve \gamma \}_s \quad \text{from} \quad \lambda - dd = \frac{\lambda}{h} . h - dd \quad \text{gives} \quad a = \frac{\omega}{-m}$$

Equation 2. is in effect N. 3. L. & Hooke's Law  $[F = -kx]$ , or  $F_s = \{-ve \lambda . \lambda\}_s$

in this model, 2.a.  $[\omega]_s = -ve \{t\}_s$  also.

We introduce **System Omega**: 3.  $\left[ \omega = \frac{mm}{\gamma^8} \right]_s = [\gamma^{-3}]_s$  also, & or equivalently we can get

$$3.a \quad \left[ \omega = \frac{k}{m} \right]_s$$

this is the simple version, and reflects a '*wave - partikle*' *mutuality* in this model.

Where  $[k]_s$  is the wave number of the system, classically  $\left[ k = \frac{1}{\lambda} \right]_s$ , thus

$$3.b \quad \omega m \lambda = 1$$

& a model **de Broglie** expression can be inferred

$$4 \quad \lambda = \omega m \gamma$$

Where subscript  $[s]$  is generally implied going forward e.g. \* system lambda  $[\lambda] = [\lambda]_s$

note: system gamma = system lambda squared, in modulus sense & literal expression of K. 2. L. Area = time.

$$5. \quad [\gamma] = [\lambda^2]$$

and from 3. above  $[mm]$  must be  $\gamma^5$

or we get system mass  $[m]_s$

$$6. \quad [m] = [\lambda^5]$$

We can see from previous identities that all parameters can be expressed in lambda or [k] numbers of any physical \* system under inspection.

In partikular 'Geometry reigns' & Keplerian **time shells** act forcefully (i.e. conservative  $[-veF]$ ),

as concentric laminae **orthonormal** to  $[x, y, z]$  dimensions, of a Gaussian style mass distribution scheme  $\sum \rho \cdot dV$

By physical \* we mean,  $\lambda s \neq 0$ , which implies also,  $m \neq 0$

Obviously the **k** – number is the reciprocal lambda number, etc, or classically

$$k^n = 1/\lambda^n$$

So if lambda cubed (classically a volume  $V$ ) yields energy,

$$\text{we may call this } m - \text{dot} = \left[ \frac{dm}{dt} \right] = \frac{m}{\gamma}$$

The reciprocal **k** – number scenario would be inverse volume or  $k^3$ , and we call that **acceleration**

$$\text{or, } \frac{d^2\lambda}{dt^2} = \text{lambda} - dd = \text{acceleration } [a] = k^3 = k - \text{dot} = [k/\gamma]$$

All identical we call this the **gravity pixel** in the lambda model,

And further add that  $[a]$  is identical with **negative mass**, or

$$[a] \equiv -ve m = m - dddd = m - '4 \text{ dots}' = \frac{m}{\gamma^4} = \frac{d^4[m]}{dt^4}$$


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The negative operator is  $\frac{1}{\gamma^4}$  and adds a  $\frac{1}{2}$  cycle clockwise rotation in the model

w.r.t horizontal the standard r.h.s. datum \* on a unit lambda complex wheel

Thus 2 negative operators in tandem gives 1 full c.w. rotation.

In essence system 'inertial mass' lies on  $\lambda^5$  a.c.w. &  $-ve$  mass lies on  $\text{lambda}^{-3}$  c.w. phase sense \*.

Mass having being divided by  $\text{lambda}^8$  here, as  $\gamma = \text{lambda}^2$ , stated previously.

**The model views inertial mass as Action, and  $-ve$  mass as reaction or  $-ve$  action.**

$$\text{Or, } \text{Action } 7. \quad \gamma \cdot m - \text{dot} = m,$$

$$\& \text{ } -ve \text{ Action } 8 \quad -ve[\gamma \cdot m - \text{dot}] = -ve m$$

$$\text{can be } 8.a \quad -ve \text{ mass} = [ -ve \gamma \cdot \text{energy } (+) \gamma \cdot -ve \text{ energy } ]$$

[2]states in omegik superposition

$$\text{We note here that } -ve \text{ energy is } \left[ \frac{\text{lambda}^3}{\gamma^4} \right] = \left[ \frac{\lambda^3}{\lambda^8} \right] = \frac{1}{\lambda^5} = k^5 = 1/m \text{ reciprocal mass.}$$

Which supplies a useful model standard utilising  $[-ve m - \text{dot}] = \frac{1}{m}$  thus a variant model gamma, in

$$9. \quad -ve [m \cdot m - \text{dot}] = 1$$

and equivalent to

$$\text{Unity} = [ \{ -ve \text{ mass} \cdot \text{energy} \} ] \leftrightarrow (+) \leftrightarrow [ -ve \text{ energy} \cdot \text{mass} ]$$

[2] states convergent at r.h.s. datum peg  $[\lambda s^0 = +ve 1]$ , on Unity model complex wheel.

With a little work most if not all of the previous identities can be morphed into & flow thro each other,  
 and we quote some model standards with resonance to classical familiars.  
 from previous view w.r.t Action = m,    -ve Action = -ve m = Reaction  $\equiv [a] \sim$  gravity  
 The product of action x reation yields the Gamma 'force' or N.2.L. & U.L.G.

$$10. \quad \gamma = -m.m \quad \text{or} \quad [m. -ve m] \equiv F = ma$$

& with a -ve Operator applied to 10. we get omega

$$11. \quad \omega = -ve . -ve [m.m]$$

$$11.a \quad \omega = [ \{ - - m . m \} (+) \{ -m . -m \} + \{ m . - - m \} ] \quad [3] - \text{states}$$

as acc = -ve mass then,    -ve a = -ve . -ve mass

$$-ve a = \left[ \frac{m}{\gamma^8} \right] = \frac{\lambda^5}{\lambda^{16}} = \frac{1}{\lambda^{11}} = k^{11}$$

$$\text{now } k^{11} = S - \text{dot} = \frac{S}{\gamma} = \frac{dS}{dt} \quad \text{i.e. entropy - rate}$$

$$\text{thus entropy } [S] = k^9 \quad \& \text{ a.c.w sense}$$

Thus we can produce another model omega expression

$$11.b \quad \omega = -ve . -ve [m.m]$$

$$\text{thus } 11.c \quad \omega = [mS] - \text{dot}$$

& expanded to

$$\omega = \{ [ m - \text{dot} . S ] \leftrightarrow (+) \leftrightarrow [ m . S - \text{dot} ] \}$$

$$\text{System Omega} = [ \{ \text{energy} \times \text{entropy} \} \leftrightarrow (+) \leftrightarrow \{ \text{mass} \times \text{entropy rate} \} ]$$

this last offers aid for darkness paradigms currently in vogue in Physik.

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 The model views energy in the classical way, say in conventional  
 Newtonian, Hamiltonian or Lagrangian sense, i.e.

these express any dynamic system of kinetic & potential energy states in mutual fluxion/s.

This is  $m - \text{dot}$  in a general model sense,    where the  $[-\text{dot}]$  operator is frequency,     $f = 1/t$

thus the model contends,

$$12. \quad [\lambda - \text{dot}]^2 = [\lambda . \lambda - dd] \text{ is likewise a frequency or } \left[ \frac{1}{\gamma} \right] \text{ expression.}$$

as  $\lambda - \text{dot}$  is a k-number, this is classically a velocity expression

$$\text{Where } \lambda - \text{dot} = \left[ \frac{\lambda}{\gamma} \right] = \left[ \frac{dx}{dt} \right] = v, \text{ as } \lambda \text{ can be } \{x\} \text{ of course.}$$

So we may derive a grounding in 12. for Fitzgerald - Lorentzian effects, such as length contraction etc,

**A model maxim is developed.**

*A terrible beauty is born*

**Large Lambda schemes have low magnitude  $[k]$  – numbers, and thus very small acceleration number.**

**Conversely very small lambda schemes have large magnitude**

**$[k]$  – number & thus very large acceleration.**

*We can further add*

**large schemes possess low magnitude entropy  $[S]$  & very low entropy rate  $[S] - \text{dot}$ , respectively.**

**Conversely large magnitude  $[S]$  & even higher  $\left[\frac{dS}{dt}\right]$  are experienced in micro – lambda schemes.**

*A fearful symmetry*

*seems apparent at Cosmological & quantum scales in Nature.*

*This maxim is counter to the standard view that the twain never meets in Quantum & Classically relativistic models, thus an 'idee fixe' developed. Science absolutely must! find a holy grail solution such as 'quantum gravity' to fix the disparity.*

*The 'dichotomy' is potentially a phenomenological perspective only, largely historical in basis, & erroneous one might suspect. Local System Model  $[h \equiv a]$  dispels this thro equality of course.*

*Physical lambda model adherents maintain that it is mistaken to mean*

*fundamentally different physics is at work here.*

*In the  $\lambda$  – model, scale is invariant and model Physik rules are quite general, regardless of size, for any particular scheme/s under investigation.*

**Model statement: There are no Universal constants, rather there are multiple sets of 'unique' system numbers**

**In multiple lambda schemes, which operate under Universal laws.**

*Let's look at some examples:*

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**Keplers 3rd Law**

$$\frac{R^3}{T^2} = \text{constant } [k]$$

*Or in model terms,  $R = \{r\} = \{x\} = [\lambda]$  or system lambda, thus*

$$\begin{aligned} \frac{\lambda^3}{\lambda^4} &\equiv \frac{\lambda^3}{\gamma^2} = \frac{\text{energy}}{\text{momentum}} = \frac{m - \text{dot}}{p} \\ &= \frac{m - \text{dot}}{\gamma^2} \\ &= \frac{m}{\gamma^3} \\ &= \omega m \end{aligned}$$

*& as product  $[\omega \cdot \text{mass}]$  equates to a system  $[k]$  – number*

*i. e.  $\omega m = k$ , Keplers costant is the  $k$  – no of our local Binary System or Newtonian  $G$ .*

*This allows us to gauge Solar scheme Omega at the Earth remove.*

*We use o. o. m. calculations and no units, or we end up with dimensionless ratios on occasion otherwise the S.I. relevant unit or units are always implied.*

$$\text{Let } M = 10^{30}, m = 10^{25},$$

*& let system mass [m]s = binary product [Mm], law of lever resonance.*

*and as the de Broglie yardstick is  $\lambda s = 10^{11}$*

$$\begin{aligned} \text{Then System Omega *, gives, } \omega &= \frac{k}{m} \\ &= \frac{1}{[m \cdot \lambda]} = \frac{1}{[10^{55} \cdot 10^{11}]} \\ &= 10^{-66}. \end{aligned}$$

*And as Omega =  $a^2$  then our local system acc pixel - ve mass =  $\sqrt{[10^{-66}]}$*

*= -ve m = [a] = modulus circa [h] the Planck unit of Action,  
we see it as -ve action of course.*

\*  $[k - \text{dot}]^2 = [k \cdot k - dd]$  is equivalent to system Omega, or

$$a^2 = k \cdot \frac{1}{m} = \text{Omega}$$

*Conjecture w.r.t. Equation 12.  $[\lambda - \text{dot}]^2 = [\lambda \cdot \lambda - dd]$*

*a transfer of one r.h.s. 'denominator' lambda is a first step to*

*K.3.L if [k] i.e. thus also  $[k^2]$  is kept 'relatively constant' the reciprocity relationship for the product  $[\lambda \cdot a]$*

*as conveyed in the model maxim, can be a candidate explanation for the Galactic rotation curves conundrum.*

*The observations multiply support flat velocity rotation curves, [12.] produces a ready M.O.N.D. style explanation,*

*actually a metrik density [GammaRho] formalism, ... sans darkness.*

*Instead of looking for 'missing' mass, we might look at  $F \propto \frac{1}{r^3}$  where locally  $\gamma = mh$  where system  $m = [Mm]$  &  $h = k^3$*

*In any case equation 12. is effectively, a classical  $mv^2 = mgh$ , where,  $[v = k = \frac{\lambda}{\gamma}] = \text{lambda} - \text{dot}$ ,  $[g = a]$  &  $[h = \lambda]$ , we might now also restore a 'cancelled' system mass [m] & omit the  $1/[2]$  factor from the Kinetic l.h.s, we say the [2] can be fashioned as states, or*

$$[\lambda - \text{dot}]^2 = [\{\lambda \cdot \lambda - dd\} \leftrightarrow (+) \leftrightarrow \{\lambda - dd \cdot \lambda\}] = \{[\lambda \cdot a] \leftrightarrow (+) \leftrightarrow [a \cdot \lambda]\} = [2] \text{ states, trivially redundant:}$$

*or in lambda script*

$$\left[ \frac{\lambda}{\lambda \cdot \lambda} \cdot \frac{\lambda}{\lambda \cdot \lambda} \right] = \lambda \cdot \left[ \frac{\lambda}{\lambda \cdot \lambda \cdot \lambda} \right] \quad \text{transfer 1 lambda to l.h.s. gives,}$$

$$\frac{[\lambda \cdot \lambda \cdot \lambda]}{[\gamma \cdot \gamma]} = \left[ \frac{\gamma}{\lambda \cdot \lambda \cdot \lambda} \right] \quad \text{i.e. } \left\{ \left[ \frac{r^3}{t^2} \right] = \left[ \frac{t}{e} \right] \right\} \equiv k \quad \text{where } \lambda^2 = \gamma, \text{ \& } t^2 = \gamma^2 = p$$

*& as  $\{r^3 \equiv \lambda^3 = \text{energy} \equiv [m - \text{dot}]\}$ , we can say  $\left[ \frac{e^2}{t^3} \right] = \text{Unity}$ , pseudo style K.3.L. a la mode*

*$\frac{\&}{or}, \{ \text{energy}^2 = \text{mass} \times \text{lambda} \} = \gamma^3$  or, reciprocal omega, ... now we can look at Dirac.*

Dirac's relativistic electron equation rendered into the model

$$m\{\psi\} = i.\gamma \frac{d[\psi]}{dx}$$

$$\text{in 1 - d here say, thus } \frac{d}{dx} = \frac{d}{d\lambda} = \frac{1}{\lambda} \text{ (approx.)} = [k]s$$

in our model imaginary  $\{i\}$  is equivalent to system momentum, thus

$$\{i\} = p = \gamma^2 = \lambda^4 = \sqrt{[m.m - dot]} = \sqrt{(-1)}$$

also, we can cancel Psi both sides, for clarity, i. e. the pared down model Dirac, now gives

$$m = k/\omega$$

Schrodinger

$$i\hbar \frac{d\{\psi\}}{dt} = H\{\psi\}$$

Again 'cancelling'  $[\psi]$  or allow Psi = Unity, let  $[i = p]$  as before, &  $d/dt = -dot = \frac{1}{\gamma}$

& as  $\hbar = \left\{\frac{h}{2\pi}\right\}$ , we ignore factor [2] as indicating perhaps 2 - states.

We get,  $\{i.\hbar\} - dot = \text{energy or,}$

$$[ \{i - dot.[\hbar - bar]\} \quad (+) \quad \{i.[\hbar - bar] - dot\} ] = m - dot,$$

where we allow for a possibility of +ve/-ve energy on r. h. s.

$$\text{Firstly, } \hbar = -ve \frac{\text{mass}}{(2)\pi}$$

$$= -mp, \quad \text{as } 1/\pi = p$$

$$= ap = k^3.\lambda^4 = \lambda \text{ in this case}$$

then  $\{i.\hbar\} - dot$  gives,

$$[p.\lambda] - dot = [ \{p - dot.\lambda\} \leftrightarrow (+) \leftrightarrow \{p.\lambda - dot\} ]s$$

$$\text{or [2] states } [ \{\gamma.\lambda\} + \{p.k\} ] = \text{energy} = \text{modulus } [\lambda^3]$$

Now +ve energy = reciprocal acceleration (gravity) or,  $[a.e] = \text{Unity}$

& if we plumb for -ve energy, that is identical to inverse mass.

So we see in the generalized T.D.S.E,

we have a very full exposition of the scheme, in either & both,

a dynamic Superposition of [2]states

$$-ve[\text{mass} . \text{energy}] = \text{Unity, identically } [\text{acceleration} \times \text{energy}]$$

&/or

$$[\text{mass} . -ve \text{ energy}] = \text{Unity} = [m/m]$$

A system incorporating +ve & -ve aspects of mass, energy,

& gravity at face value and the system Omega within.

Maxwell & Faraday.

$$-\frac{dB}{dt} = \nabla \times E$$

We state some assumptions, the minus sign here (−) is model – ve Operator

$B$  can be  $[m.\gamma] = \text{lambda}^7 \text{ unity wheel} * \text{peg coincident with both moment of inertia } [I]$ ,  
and also  $[S] = k^9$ , but we go with the former case here

$$\text{so, } \frac{dB}{dt} = \frac{[m.\gamma]}{\gamma} = m$$

$$\text{Likewise, } -ve \frac{dB}{dt} = -ve \text{ mass} = [a]$$

$$\{t\} = [\gamma]s, \quad \nabla = Del = \frac{d}{dx} \text{ in } 1-d, \text{ and thus } = [k]s$$

$E = -ve \text{ frequency}$ , and/or  $-ve. -ve[m.\lambda]s$  identically =  $-ve[\text{energy}^2]$  thus  $E$  yields  $1/mm$

& finally the classical  $[X]$  vector product, is also =  $-ve \text{ Operator} = \frac{1}{\gamma^4}$

we get,

$$a = del \times E$$

$$= k \cdot -ve \frac{1}{mm}$$

$$= \frac{-vek}{mm}$$

$$= \frac{S}{mm}$$

$$= k^9 \cdot k^{10} = k^{19}$$

Now  $k^{19}$  is coincident with the 'peg'  $[k^3] = [a]$

on the familiar unit –  $\lambda$  complex wheel

after 1 full c.w. rotation by  $k^{16}$ , thus

$$-ve \text{ mass} = a$$

Note: The model uses a \*Unity lambda complex wheel with `16 pegs set apart at intervals of  $[\pi/8]$

The general lambda  $[\lambda s]$

$$14. \text{ System Lambda} = \left[ \lambda \cdot e^{i\frac{\pi}{8}} \right]^n \quad n = +/\{-0, 1, 2, 3, \}$$

+ve integers yield  $[\lambda]^n$  and –ve integers  $[k]^n$

these, cycle in acw & cw rotation sense, respectively.

Maxwell cont.

Similarly on the unity wheel, we see [B] & [S] share a coincident peg,

therefore is it possible that [B] could a micro lambda

phenomenon label for entropy [S], and of course visa versa? Say,

$$\omega = \left[ \frac{mS}{\gamma} \right] = \left[ \frac{mB}{\gamma} \right]$$

$$= [mS] - \text{dot} = [ \{ m - \text{dot} . S \} \leftrightarrow (+) \leftrightarrow \{ m . S - \text{dot} \} ] \quad \&/\text{or}$$

$$= [mB] - \text{dot} = [ \{ m - \text{dot} . B \} \leftrightarrow (+) \leftrightarrow \{ m . B - \text{dot} \} ]$$

$$\text{Then } \frac{w}{m} = B - \text{dot} = \frac{k}{mm} = k.E$$

Thus we derive a familiar,  $E = cB$  can be found

$$B = E.[k\gamma] = E.\lambda \quad \text{thus}$$

$$E = \frac{B}{\lambda} \equiv kB = cB \quad \& \text{ now also } cS = kS = E = k^{10} \quad \& \text{ from}$$

$$w/m = B - \text{dot} \quad \dots \text{for quantum scale* systems}$$

allowing that the [B] – field phenomenon \*  $\equiv$  entropy [S], an historic mistook doppelganger, actually all 1 entity & running with it here.

$$[-m.-m]/m = dB/dt \quad \text{then,}$$

$$-m = -dB/dt = [a], \text{ etc}$$

w.r.t to generic Platonik identities in the model there are many 2<sup>nd</sup> order equations or identities which allow for resonance with Classical ideas.

Generally any sensible *dummy parameter* [\$]

+ve /-ve will do to emulate  $\gamma . [\$] - \text{dot} = [\$]$  examples,

$$[\$] = \{ \text{mass}, \quad \text{lambda}, \quad \text{Hooke } [K], \quad \text{entropy}, \quad \text{etc}$$

Which aligns well with another 2nd order type

$$[[\$] - \text{dot}]^2 = [\$] . [\$ - dd]$$

and some notable examples are again lambda, & [k], mass, entropy, omega, & gamma, [K], etc,

Thus we may look at the Lambda model System gravity pixellation from an array of

cyclik & mutually iterative 'sources' especially so if we allow [c.w.] & [a.c.w] Unity complex wheel coincidence pegs.

e.g. {entropy [S] &/or [B] – field = [k<sup>9</sup>] or [λ<sup>7</sup>]} &/or

-ve mass = [a] = [k<sup>3</sup>], or [k<sup>19</sup>], or potentially? [λ<sup>13</sup>] or 'gravity angle',

aligning with some modern paradigms i.e. 'emergence phenomenon'

linking perhaps,

system rate of entropy  $\frac{dS}{dt}$  with -ve gravity – a, which is also, -ve. -ve mass, in rotation or phase sense.

This [dS/dt] can be a candidate for Einstein's Cosmological constant Λ, in our Solar scheme

$$'S - \text{dot}' = \left[ \frac{S}{\gamma} \right] = [k]^{11} = 10^{-122}, \text{ circa some current estimates of } [\Lambda] \dots \text{'dark energy' perhaps?}$$



Maxwell cont.

We'll approach it differently here, allowing a 2<sup>nd</sup> order gamma differential or double dot [-dd]

Acting on Maxwell's equations.

$$-\frac{d^2 B}{dt^2} = \nabla \times \frac{dE}{dt}$$

in model terms,  $dE/dt = E - \dot{E} = 1/[mm\gamma]S = k^{12} = \omega^2$

so we get

$[-vem]/\gamma = -\omega^2 \cdot k$  now transpose the gamma

$$-ve \text{ mass} = -ve \omega^2 \cdot [\gamma k],$$

yields the familiar s.h.m. expression

$$-\omega^2 \cdot \lambda = a$$

By transferring the -ve sign, we get

$$\omega^2 \cdot \lambda = -ve a = S - \dot{S} = \left[ \frac{S}{\gamma} \right]$$

$$= \frac{dS}{dt}$$

*allows gravity – –entropy 'emergence' paradigm*

Lorentz Force equation

$$F = q [E + v \times B]$$

There are many routes through this to yield [+ve &/or-ve] force

i.e. [F] gives *gamma or omega* respectively.

The standard assumptions apply,

say charge = +ve or -ve, or +q, -q

Charge in this model is [m.k] gives [q] =  $\lambda^4$  or [p] perhaps,

& -ve[mk] = [-q] =  $k^4$  or [ $\pi$ ] perhaps

$$E = 1/mm = k^{10}$$

$$B = [m\gamma] = \lambda^7 \quad \text{or could be } [S] = k^9$$

We can say [X] product is -ve Operator or a standard multiplier {x}

Velocity [v] can be [c] &/or system k, of course.

Fun can be had & we get several reasonable results for variant input

& some feel,... *more natural than others*

### The Hamiltonian

$$(1) \quad dq/dt = +ve \partial H/\partial p$$

$$(2) \quad -ve dp/dt = \partial H/\partial q$$

*I'm allowing previous relaxations w.r.t. 'fairly wide latitude' applies to the formalism*

*i.e. I often make no distinction between partial  $[\partial]$  &  $[d]$ ,*

*and indeed freely cancel these on most occasions, to generate the 'pared down' identity or equation.*

*Generally the Hamiltonian is relaxed to*

$$[H] = \text{composite 'system' energy} = m - \dot{m} = \frac{dm}{dt} \cdot \text{etc}$$

$$[q = \lambda], [p = \text{model momentum}], [t = \gamma], \text{etc}$$

*Thus, we get*

$$(1.a) \quad k = \omega m$$

$$(2.a) \quad \gamma = -ve [m - \dot{m}] \cdot k$$

$$\text{And as system gamma force} = [m \cdot k] - \dot{m} = [\{m - \dot{m}\} \cdot k \leftrightarrow (+) \leftrightarrow \{m \cdot k - \dot{m}\}]$$

*And we can say l.h.s. gamma in (2.a) = omega, from  $\omega = -ve [\gamma]$  and general commutativity*

*w.r.t. the minus sign, i.e. classically this can transpose across the equality, etc.*

*Note: The model sees an easier way than previous example, whereby we suggest, very respectfully, that a -ve sign may be missing on l.h.s. of conventional Hamiltonian [2],*

*but we can largely bypass that by rewriting Hamiltonian 1 in model terms*

$$H1: \quad \lambda - \dot{m} = \frac{m - \dot{m}}{p} \quad k = \frac{\text{energy}}{\text{momentum}} = \pi \cdot [m - \dot{m}] = \left[\frac{m}{\gamma^3}\right]$$

*then simply post a -ve sign on both sides of H1 to give,*

$$H2: \quad -ve \lambda - \dot{m} = \frac{-ve m - \dot{m}}{p}$$

*Applying the model mode, we get*

$$H1: \quad k = \omega m$$

*as before, & H2: gives  $[-ve k] = [-ve \text{ energy/momentum}]$ , or*

$$H2: \quad S = -ve [\omega \cdot m]$$

$$S = [\{-ve \omega \cdot m\} \leftrightarrow (+) \leftrightarrow \{\omega \cdot -ve m\}]$$

*or an entropy expression, where alternatively we could say, Hooke's constant is differentiated once w.r.t. gamma,*

$$[dK/dt] = K/\gamma = K - \dot{m} = [k^7/\gamma] = S$$

$$S = k^9 \quad \text{c.w. 'peg'}$$

Of course this begs the Q? why not differentiate model Hamiltonians once again, or more.

$$* H1 : \lambda - dd = \frac{m-dd}{p} \quad \text{gives } [a] = \text{-ve mass}$$

$$* H2 : -ve\lambda - dd = \frac{-ve m-dd}{p} \quad \text{gives } -ve[a] = dS/dt$$

Nothing very extraordinary here as we could emulate these new model entries by a minor variant on Hamilton's originals, say for H1 alone, we could say.

$$\begin{aligned} H1.a: \quad & \frac{\partial H}{\partial t} \cdot \frac{\partial t}{\partial p} = \frac{dq}{dt} \quad \text{allowing } \frac{dH}{dp} = \frac{dq}{dt} \\ & \text{Or simplified to } \frac{H}{p} = \frac{\lambda}{t} \quad \text{or, } H \cdot t = p \cdot \lambda \\ & \text{that gives, } \gamma \cdot m - \text{dot} = \text{mass} \quad \text{of course., as } [p] = \lambda^4 \end{aligned}$$

H1.a: is identical to/& could also be, a la mode

$$\gamma - \text{dot} \cdot \frac{\partial H}{\partial p} = q - \text{dot} \quad \text{allowing } [e/p] = k, \text{ \& energy} = pk = [pc] \text{ familiar} \\ \text{\& } [e \cdot \lambda] = p$$

And something similar but also inclusive of the -ve Operator both sides  
for remodelled H2, where we said H2 = -ve H1

$$\begin{aligned} -ve \left[ \gamma - \text{dot} \cdot \frac{\partial H}{\partial p} \right] &= -ve [q - \text{dot}] \quad \text{allowing } [-ve \text{ energy } / p] = -ve \text{ lambda} \\ \text{and as } -ve \text{ energy} &= \text{reciprocal mass,} \quad \text{and } -ve \text{ lambda} = \text{Hooke } [K], \text{ we get} \\ 1/mp &= K - \text{dot} \\ [K] &\text{ is Hooke's constant, or reciprocal Moment of Inertia } [1/I] \end{aligned}$$

$$\begin{aligned} \text{Then another Unity identity is found } m \cdot p \cdot K &= 1 \\ \text{now } [m \cdot K] &= [\text{lambda}^5 \cdot \text{Lambda}^{-7}] = 1/\text{lambda}^2 = \text{frequency, } f = 1/\text{gamma} \\ \text{Thus } 1 &= pf = p - \text{dot} = \left[ \frac{p}{\gamma} \right] = \left[ \frac{dp}{dt} \right] = \gamma^2/\gamma \\ \text{gives system gamma } [\gamma]s &= [F] = \{t\}, \text{ in this scheme.} \end{aligned}$$

Note: The classical Unity identity for reciprocal time & frequency  $[f = 1/t]$  also has a model analogue, in

$$[\gamma - \text{dot}]^2 \equiv [\gamma \cdot \gamma - dd] \quad \text{i.e.} \quad 1^2 = t \cdot f$$

in lambda script we devolve down thro gamma

$$\left[ \frac{\gamma \cdot \gamma}{\gamma \cdot \gamma} \right] \equiv \left[ \gamma \cdot \frac{\gamma}{\gamma \cdot \gamma} \right] \quad \text{to give,} \quad \frac{[\lambda \cdot \lambda \cdot \lambda \cdot \lambda]}{[\lambda \cdot \lambda \cdot \lambda \cdot \lambda]} \equiv [\lambda \cdot \lambda] \cdot \frac{[\lambda \cdot \lambda]}{[\lambda \cdot \lambda \cdot \lambda \cdot \lambda]}$$

Lambda script is representative of a lambda scheme 'operating iteratively on itself' at perhaps?  
some base Platonik geometrik level in Nature.

That is to imply, it is **One System lambda in 'fluxions'**. Not the multiples of lambda arrayed in the fashion we see immediately above, that is merely our pedestrian attempt at algebraic formulism emulating some as yet, unknown dynamik dimensionality in Nature,

& thus can be mproved upon no doubt, with expanded lambda identity 14.  $\left[ \lambda \cdot e^{\left[ \frac{t\pi}{8} \right]} \right]^n$  as 1st approximation in our model.

Einstein, Planck, De Broglie & Heisenberg, et al

$$S.R. \quad \& \quad E = mc^2$$

*becomes energy = m-dot = mass . frequency*

$$E = m.k^2$$

*The model invokes a direct constant of proportionality for the mass energy equivalence*

$$14. \quad \gamma.m - \dot{m} = m$$

*Which is a simple derivative from the system energy  $e = [\text{mass}/\gamma] = [dm/dt]$*

*Or the Action principle, as seen in Heisenberg's pared back Uncertainty Principle*

*Featuring energy & time in product, with  $[h]$  as the minimum of action,*

$$E.t \geq h, \quad \& \quad \text{also used in } \Delta p.\Delta x \geq h$$

*Which can be pared back to yield Louis de Broglie's wave hypothesis*

$$\lambda = h/p$$

*the model explicitly allows for -ve mass =  $[h]$*

*thus we have [2] de Broglie's +ve & -ve lambda in a sense*

$$1. \quad m = p.\lambda$$

$$+ve \text{ mass} = \text{momentum} \times \text{lambda}$$

$$= [\text{lambda}]^5, \quad \text{locally } [Mm]$$

$$2. \quad -ve \text{ mass} = -ve[p.\lambda] = [ \{ -ve p.\lambda \leftrightarrow (+) \leftrightarrow p.-ve \lambda \} ]$$

$$= [\text{lambda}]^{-3}, \quad \text{locally } -ve [Mm] = [h]$$

$$2. \text{ gives } acc[a] = \{ [\pi.\lambda] \leftrightarrow (+) \leftrightarrow [p.K] \}$$

$$\text{where } [p] = \lambda^4, \quad \& \quad [K] = k^7 = \text{Hooke's constant.}$$

As we introduced de Broglie here, we see the **Photo – electric effect** and the **Einstein – Planck** relationship has similarly modelled omega attributes.

$$E = h.\nu \text{ can possess (+ve/-ve) flavours,}$$

$$-ve E = -ve [\text{mass} . \text{frequency}] = [ \{-ve m - \text{dot}\} \leftrightarrow (+) \leftrightarrow \{m . -ve f\}]$$

$$(\&) + ve E = m - \text{dot} \quad \& +ve \text{ energy, potentially sourced via } \{m . -ve[m.\lambda] = \{\text{gamma} . \text{lambda}\} = \lambda^3$$

The combination can yield up model identity

$$-ve[\text{mass.energy}] = 1$$

thus

$$[\text{mass.energy}] = -ve 1$$

$$\text{Unity} = \lambda^0 \& \{n\} \times 2\pi \text{ repeats to } \lambda^{16} = \{2\}\pi, [a. c. w. ], \text{etc}$$

$$\text{And } -ve 1 = \lambda^8 \& \{n\} \times 2\pi \text{ repeats to } \lambda^{24}, [c. w. ], \text{etc}$$

Where  $\frac{+ve}{-ve} [1]$  can be fashioned by various periodic  $\{k^n\}$  of course also, with

$$\frac{1}{2\pi} [c. w. ] \text{ rotation sense application.}$$

w.r.t. the Photo – electric effect

$$\underline{\text{kinetic energy } E = h.\nu - \emptyset}$$

we see, that the **work function Phi**, can be seen as the need to overcome the **-ve** 'binding' energy perhaps,

and in any case it is a re – working of the previously stated unit model identity.

**The equivalence principle & G.R.**

The model says **-ve** mass =  $a$  = gravity or 'curvature - geometry'

Thus  $a = k^3 = k - \text{dot} = 1/e$ , and 'geometrically = reciprocal Volume'

Now looking at

$$G_{\mu\nu} = 8\pi G T_{\mu\nu}$$

My assumptions are,  $G_{\mu\nu}$  yields 'gravity' [ $a$ ]

$T_{\mu\nu}$  is density Rho =  $\frac{\text{mass}}{\text{Volume}}$  or Boylesque gamma

Ignore factor [8] as states, or some such,  $G = k - \text{number}$ ,  $pi = 1/p = k^4 = 1/\gamma^2$

then we get

$$\begin{aligned} \text{Gravity} &= \pi \cdot k \cdot \rho \\ &= [k \cdot \rho] - dd \\ &= [k - dd \cdot \rho] \leftrightarrow (+) \leftrightarrow [k - \text{dot} \cdot \rho - \text{dot}] \leftrightarrow (+) \leftrightarrow [k \cdot \rho - dd] \\ &= \left[ \frac{\rho}{m} \right] (+) [a \cdot 1] (+) [k \cdot f] \leftarrow [3] \rightarrow \text{states} \end{aligned}$$

The 2nd & 3rd term are acceleration/gravity [ $a$ ], & equivalent  $k - \text{dot}$ , respectively

The 1st is equivalent to  $[\gamma/m] = 1/\text{energy} = [a]$

Thus we retrieve  $[-m \cdot m - \text{dot}] = 1$

-----

w.r.t. Boyle's Law,  $[PV] = \text{constant}$

can be,  $[\gamma - \text{dot} \cdot m - \text{dot}] = [1] \cdot \text{Energy}$

energy is the constant, gamma is the density,

& pressure  $P = F/A = [\gamma/\gamma] = \gamma - \text{dot} = 1$ , & energy =  $\lambda^3 = \text{Volume}$

Hooke also deserves a mention as alike Kepler, he, perhaps unwittingly?, pointed towards the model identity

**-ve**  $F = \text{Omega}$ s with Hooke's law in 1660.

Nullius in verba.

There are multiple more examples I suggest, but hats off to Kepler in particular,

not to mention Tycho, & Kopernik, & Galileo 'eppur si muove'

& with certainty, Giordano Bruno 'the martyred one', had a stake also.

It seems a grand synthesis is in prospect, and lo! 'All Religions are 1'. [W. Blake]

& now these three remain.

$$1.c \quad [ \{ h - dd \cdot \lambda \} \leftrightarrow (+) \leftrightarrow \{ h - \text{dot} \cdot \lambda - \text{dot} \} \leftrightarrow (+) \leftrightarrow \{ h \cdot \lambda - dd \} ]$$

*On Raglan road of an Autumn's day I met her first & knew ... The 'Peasant poet' Patrick Kavanagh.*

*Aeons before the Big Bang &/or One bright blue Rose*

*This business of coincidence pegs on the Unity Wheel, can reveal some surprising results,  
but we have to jump severally back & forth along 'constant slope' radials which cut thro 'bothwise' + ve &  
-ve integer spirals, and dance thro 'fantasy & faith' ... well after a Fashion. Firstly Ludwig Boltzman.*

$$S = k \log W$$

*I take [W] to equal energy, & / or Volume, &  $\lambda^3$  & / or  $m - \dot{}$  =  $\left[\frac{m}{\gamma}\right]$ . [k] Boltzmann's constant.*

$$\text{Then o.o.m calculations local scheme, } S = 10^{-23} \cdot \log [10^{11}]^3$$

$$\text{gives } S = 33 \times 10^{-23} \text{ or } 3.3 \times 10^{-22} \text{ or } 3.3 \times f = \frac{3.3}{\gamma} \text{ say } \frac{3}{\gamma}$$

$$\text{as } [f]_S = [k]_S^2 = [10^{-11}]^2 = [G]^2$$

*Now from Thermodynamiks: energy is  $m - \dot{}$  = ST*

*we get, [  $m = ST\gamma$  ] &  $[T]_S \cdot \gamma = \lambda^{14}$  [a.c.w.] is 'coincident' with [c.w]  $k^2 = \text{frequency } f$*

*Thus (mass) = S.f*

*can this be true? Well we embrace bothwise rotation or phase 'sense' coincidence in Nature in this model.*

$$[a.c.w. \text{ mass} - \text{peg}] @ [\lambda^5] \approx [k^{11}] @ [c.w. \{S.f\} - \text{peg}] = \left[\frac{S}{\gamma}\right]$$

$$\text{\& previously } [S] \text{ was } 3.f \text{ so now, } [S].f = 3.f^2$$

$$= [3.\pi] \text{ as } [pi] = f^2 = k^4$$

$$\text{\& } k^4 = [\pi]_S \text{ is a [c.w.] coincidence peg with Temperature } T = \lambda^{12} \text{ [a.c.w] } -ve T = [p] - ve. -ve T = [\pi]$$

*So with seemingly no shame, ... I am claiming we have [3 K @ pi peg]*

*the CMBR circa 3 deg is a local system phenomenon.*

*[3] is the magnitude temp in Kelvin*

*\& [pi]\_S is the position  $k^4 \approx \lambda^{12}$  peg co - existent in phase space of the generic  $\lambda$ s model with Temp.*

*We can say Temperature @  $\lambda^{12}$ , shares a common radial, with  $-ve T \equiv \text{momentum } [p]$  &  $-ve p \equiv [\pi]$*

*All lie on the same slope, the lowest magnitude signal is on  $-ve [pi]$  or*

*$-ve - ve. -ve T$  at  $\{n = -12\}$ , or  $[k^{12}]$  but that would be down in the noise I suspect @ mag circa  $10^{-132}$ .*

*The intermediate values are  $[\pi]$  &  $[p]$  @ integers*

*$[n = -4, \& +4]$  yield 'signals' circa  $10^{-44}$  &  $10^{44}$  respectively, and the highest magnitude would be  $T$  @  $[n = 12]$ , gives  $10^{132}$ .*

The System lambda thro generic Omega.

From the classical view  $-\omega^2 \cdot x = a$ , as shown previously, let  $[x = \text{lambda}]$  we can fashion

$$\omega^2 \cdot \lambda = -ve a \quad \& \quad -ve a = \frac{dS}{dt} = S - dot$$

also,  $\omega^2 = \frac{1}{T} = k^{12}$  from the wheel, whence from  $[mass = KT]$  we can yield classical  $\omega = \sqrt{\left[\frac{K}{m}\right]}$

Then a model variant 'Thermodynamik & Entropik' model de Broglie presents itself.

System lambda  $\lambda S = [S.T] - dot$ , or in expansion

$$\lambda = \{ \{ S - dot.T \} \leftarrow (+) \rightarrow \{ S.T - dot \} \}$$

& we can devolve down to the Hooke constant here,

$\lambda = [K.T] - dd$  gives [3] flavours

$$\Lambda = \{ \left[ \frac{d^2 K}{dt^2} . T \right] \leftarrow (+) \rightarrow \left[ \frac{dK}{dt} . \frac{dT}{dt} \right] \leftarrow (+) \rightarrow \left[ K . \frac{d^2 T}{dt^2} \right] \}$$

Then system  $[k]$  locally  $[G]$  is fashioned from lambda - dot,

& gravity,  $k - dot \equiv \text{lambda} - dd = [a]$ , ... locally  $[h]$

We state as.

$$[k] = [K.T] - ddd, = \omega KT$$

$$[a] = [K.T] - dddd = -ve [K.T] = [ \{ [-ve K] . T \} \leftarrow (+) \rightarrow \{ K . [-ve T] \} ]$$

$$\text{Gravity} = [ \{ \frac{d^3 S}{dt^3} . T \} \leftarrow (+) \rightarrow \{ K . \frac{d^3 T}{dt^3} \} ]$$

thus our local scheme gravitas pixel

$$[h] = \omega ST (+) Kp$$

Allows for a modern dynamik paradigm in

$re - action \equiv -ve \text{ mass}$  to augment the equivalent & discrete

$$\text{classical } [a] = \frac{d^2 x}{dt^2}$$

$$i.e. \text{ local system gravity} = [a] = [h] = \sqrt[4]{\left[\frac{K}{m}\right]} = \frac{1}{\sqrt[4]{T}} = \frac{1}{e}$$

thus our model classic variant  $[\gamma]$ ,  $-ve[m.m - dot] = \text{Unity}$

This invokes the quantum of Action, & classical mechanics Entropy & Thermodynamics

+ New  $\Lambda$ -model System Omega, Entropy.



From this we can produce a **hot** new model for time, alongside other variant possibilities,

System gamma = Force &/or time, as  $[\gamma]s = m. -vem$

Then System time can be expressed Thermodynamikly

$$\text{Time } \{t\}s = \frac{m}{[\sqrt[4]{T}]} = m. \textcolor{red}{h}$$

This would suggest that the local De Broglie circa  $10^{11}$  (m)

Is our System lambda, yardstik exemplar of a 'closed' Physikle system in equilibrium with itself,

dynamikly self – regulating and @Peace! ... in Our best of all variant Worlds

... ^' Tread softly, for you tread on my dreams!' W.B.Y.

,

Appendix on [e] numbers resonance with our local lambda scheme.

What about the numbers? ... follow the numbers.

Our lambda schemes have Logarithmic [e]integral. & we use o. o. m. calculations

We may note some resonance to familiars in Physik @ our local yardstick ... here { e } is standard Euler number, & { log } is base 10 ,

$$e^{\log[K]} \approx e^{[-77]} \approx 10^{-33} \text{ -- } \textcolor{red}{ve} \text{ mass, } \quad \text{or } k - \text{dot}, \quad \text{or acc } [a], \quad \sim [\textcolor{red}{h}]$$

$$e^{\log\left[\frac{1}{K}\right]} \approx e^{[77]} \approx 10^{33} \text{ m - dot energy } [e]$$

$$e^{\log[S]} \approx e^{-99} \approx 10^{-43} \sim \text{System } [\pi] \sim \text{Planck } \{t\}$$

$$e^{\log\left[\frac{1}{S}\right]} \approx e^{99} \approx 10^{43} \sim \text{System } [p] = [mk] = G M m$$

$$\text{thus, } [e^{-\log S}] - \text{dot} = \frac{G m m}{r^2}$$

$$\text{Similarly, } \left[ e^{\log\left[\frac{1}{K}\right]} \right] - \text{dot} = \frac{1}{\gamma} \left[ e^{\log\left[\frac{1}{K}\right]} \right] \sim [\lambda] s$$

$$\& \quad [e^{\log S}] - \text{dot} = \frac{1}{\gamma} [e^{\log S}] \sim [\omega] s$$

$$\& \quad \left[ e^{\log\left[\frac{1}{S}\right]} \right] - \text{dot} = \frac{1}{\gamma} \left[ e^{\log\left[\frac{1}{S}\right]} \right] \text{ gives } \sim [\gamma] s$$

In shortened form  $e^{-22}$  or  $e^{Kb}$  ? or  $e^f$  , or  $e^{\left[\frac{1}{\gamma}\right]} \sim 10^{-10}$  circa Atomic lambda

$e^{-33}$  or  $e^{-vem}$ , or  $e^h$ , or  $e^a \sim 10^{-15}$  approx Nuclear lambda ....

$e^{-44} \sim 10^{-19}$  circa 'charge' [q] elektron

$e^{-55}$ , &  $e^{-66}$  approx mass of nucleus & electron respectively

$e^{55}$ , &  $e^{66}$  approx mass of Earth & Sun respectively

$e^{121}$  & or  $e^{-\log[S]}$  approx product mass  $Mm$

$e^{\log[S]} = e^{-121}$ ,  $\sim \textcolor{red}{ve}[Mm] - \text{dot} \equiv 1/[Mm] \dots$  & so on.

*I give you the end of a Golden string, ...*